AMENDMENTS TO THE CLAIMS

1-94. (Canceled)

95. (New) A medical treatment system, comprising:

an elongate insertion device configured for insertion into a natural opening of a body;

an energy source coupled to a proximal end of the insertion device; and

an energy transmitting device located at a distal end of the insertion device, the energy transmitting device electrically connected to the energy source through the insertion device and comprising an antenna configured to transmit energy generated by the energy source to a target tissue area in the body,

wherein the distal end of the insertion device is controllable to position the energy transmitting device in relation to the target tissue area.

96. (New) The system of claim 95, the antenna comprising a radio frequency (RF) antenna.

97. (New) The system of claim 95, the antenna comprising a microwave antenna.

98. (New) The system of claim 95, the antenna comprising a directional RF antenna.

99. (New) The system of claim 95, further comprising a light source configured to illuminate an area proximate the distal end of the insertion device, the insertion device including an observation eye piece to provide viewing of the illuminated area.

100. (New) The system of claim 95, the energy transmitting device comprising an expandable

portion which extends radially from the insertion device.

101. (New) The system of claim 100, the expandable portion defining an interior region, wherein the antenna is located in the interior region.

102. (New) The system of claim 100, wherein the antenna is located in an exterior surface of the expandable portion.

103. (New) The system of claim 100, the antenna comprising a plurality of electrically conductive elements spaced circumferentially about an exterior surface of the expandable portion.

104. (New) The system of claim 95, wherein the body opening is the esophagus.

105. (New) The system of claim 104, wherein the target tissue area is the esophageal sphincter.

106. (New) A medical treatment system, comprising:

an elongate insertion device configured for insertion into a natural opening of a body;

an energy transmitting device located at a distal end of the insertion device and comprising

an expandable portion which extends radially away from the insertion device, and

an electrically conductive element configured to transmit energy to a target tissue area in the body; and

a conductor extending through the insertion device and configured for electrically connecting the energy transmitting device to an output of an energy source coupled to a proximal end of the insertion device,

wherein the distal end of the insertion device is controllable to position the energy transmitting device in relation to the target tissue area.

107. (New) The system of claim 106, the expandable portion defining an interior region, wherein the electrically conductive element is located in the interior region.

108. (New) The system of claim 106, wherein the electrically conductive element is located in an exterior surface of the expandable portion.

109. (New) The system of claim 106, the electrically conductive element comprising a plurality of electrically conductive elements on an exterior surface of the expandable portion.

110. (New) The system of claim 106, wherein the body opening is the esophagus.

111. (New) The system of claim 110, wherein the target tissue area is the esophageal sphincter.

112. (New) A medical treatment system, comprising:

an insertion device configured for insertion into a natural opening of a body, the insertion device comprising

a proximal end,

a distal end,

an expandable structure located at the distal end, the expandable structure defining an interior region, and

a lumen extending from the proximal end to an interior region of the expandable structure;

an energy source coupled to the proximal end of the insertion device, wherein an electrically conductive element located on an exterior surface of the expandable structure is electrically connected to the energy source through the insertion device, the conductive element configured for transmitting energy generated by the energy source to a target tissue area in the body to thereby heat the target tissue area sufficient to change a state of collagen in the target tissue area; and

a cooling medium supplied through the insertion device lumen to the interior region of the expandable structure, the cooling medium of a type causing heat to be drawn away from a surface tissue layer of the target tissue area while heating energy is being transmitted to the target tissue area by the conductive element.

113. (New) The system of claim 112, wherein the energy source generates radiofrequency energy.

114. (New) The system of claim 112, wherein the insertion device comprises an endoscope.

115. (New) The system of claim 112, wherein the insertion device comprises a catheter.

116. (New) The system of claim 112, wherein the expandable structure comprises an inflatable balloon.

117. (New) The system of claim 112, wherein the conductive element comprises a plurality of spaced-apart conductors.

118. (New) The system of claim 117, wherein the conductors are arranged in a fanned configuration.

119. (New) The system of claim 112, wherein the body opening is the esophagus.

120. (New) The system of claim 119, wherein the target tissue area is the esophageal sphincter.